

**IN THE ABSTRACT:**

**Please add an Abstract as follows:**

**ABSTRACT OF THE DISCLOSURE**

The invention relates to a method and a device for carrying out emission spectroscopy, in particular laser emission spectroscopy. According to said method, a pulsed laser beam is automatically focussed on a workpiece to generate a laser-induced plasma, the radiation emitted from the plasma is detected and an elemental analysis is performed using the captured radiation spectrum. The invention is characterised in that a laser beam impingement is carried out with a variable pulse interval  $\Delta T$ , that prior to the plasma generation, additional geometric parameters  $P_1, P_2 \dots P_N$  of a potential measurement location on the workpiece surface, in addition to the distance  $d$  of the autofocus lens from said workpiece surface are determined and in that an elemental analysis is only performed for the potential measurement locations, at which at least one of the additional geometric parameters lies within a predefined tolerance range  $[T1..T2]$ .